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Maine Farmer.

Z. A. GILBERT, Agricultural Editor.

It is when fruit trees are bearing that they need plant food in abundance, says Prof. Roberts. It has been discovered that tillage rather than high fertility produces the strong, healthy, fruitful tree.

Prof. Munson predicts that within the next ten years the cultivation of the garden blueberry will assume large proportions in Maine, and surely with this prolific crop there are great opportunities if the cultivation can be successfully carried forward.

There is a fortune in an orchard of Wealthy apples waiting for an orchard of Northern Spy set at same time to come into bearing. The Wealthy comes into bearing and loads heavily, as soon as large enough to hold up the fruit. The most money is not always from the variety that sells for the highest price per barrel.

During some experiments carried forward lately by Dr. Leonard Pearson, State Veterinarian of Pennsylvania, he found one cow, healthy, not reacting to the tuberculin test, whose milk injected into guinea pigs would kill within twenty hours, while that from a tuberculous cow would not kill for twenty days. No one is able to explain the peculiar condition, but it suggests a fruitful field of investigation.

The State Horticultural Society of Minnesota offers \$1,000 for a new seedling apple specially adapted to the requirements of that state. The tree must be as hardy as the Duchess of Oldenburg, and as good a bearer as that variety. The fruit must be equal in size, quality and appearance to that of the Wealthy and must keep as well as the Malinda, which variety will keep in an ordinary cellar, under ordinary conditions, until March without deterioration. It will not be an easy matter to secure so many of the most important characteristics in a single variety, so it may be a long time before the society will be called upon to pay its offered prize.

A measure of the criticism passed upon agricultural colleges is due to the class of men that in some cases are directing their work, but more often at the present time to a lack of understanding of their work. Some one has well said, "The man who stands at the head of a department in an agricultural college in these days must be backed by a practical qualification to hold a clear title to a professorship. Some men are all intellect and no work; others are all work and no intellect. The true Professor of Agriculture, as well as the successful farmer, unites both." Knowledge never becomes a power only through its application. Possessing knowledge and understanding its application is a double qualification that is fast becoming a power in the broad field of agriculture.

SECONDHAND MATERIAL.

In referring to the biennial meeting of the American Pomological Society held sometime since at Philadelphia the *Country Gentleman* mildly criticized several of the papers and lectures given at the meeting as being secondhand material, that is, having been prepared for and presented at other meetings of a similar nature.

With so much public work being done by organizations and institutions of a kindred relation as is now the case in horticultural and agricultural lines it is hardly possible that any single worker, called upon as he frequently is to appear before public gatherings under the auspices of different organizations, can at all times present only that which is new. Unrepeated knowledge is not made fast enough for that. There must of course be more or less presented that has before been known and said. Still we believe a measure of criticism may properly be made on work of the kind seen at many of the public gatherings in such a line as the dissemination of knowledge in affairs related to the soil and its products. We have noted the same in gatherings of the kind in our own state.

The point we would here call particular attention to is that the character of the papers and lectures presented at these public gatherings should correspond to the nature and importance of the organization having the business and the exercises of the particular meeting in hand. A meeting in charge of a state organization, possibly sustained by state aid, carries with it an importance corresponding with its standing. Holding the first position, of its kind, its exercises should be of the highest order. Its papers and lectures, instead of being secondhand goods, should be of a studied character prepared expressly for the occasion. If the exercises on such stated occasions are not elevated above the commonplace volunteer work of farmers' clubs and granges, then the organizations in charge have no room for their existence and may as well give way to volunteer associations, and let them do the work. People in attendance on state

meetings devoted to a special work have a right to expect exercises of a higher order than the off hand offerings without studied preparation. Specialists and lecturers making engagements with such organizations are in duty bound to make special effort to meet the responsibilities of the position. It is a breach of trust to palm off secondhand material that has been worn threadbare on other less responsible occasions.

We would not in any way disparage the work of subordinate organizations. They are doing a needed and a noble service. But it is all preliminary to and preparatory for that higher plane of influence sought by the associations fostered by the state.

STANDARDS OF MERIT.

Hereford breeders have recently held a combined show and sale of their favorite white-faces at Kansas City. The occasion was a marked success, measured from every point of view. At the great fair here in New England, and especially at our own state exhibition, there has been a measure of conflict of judgment between the owners of the stock in the Hereford and Shorthorn classes and the judges commissioned to award the prizes over the standards of merit adopted or used by the judges in making the awards. It will be borne in mind that at these competitive shows the entries in the different breeds of cattle are supposed to be, required to be, breeding stock. Notwithstanding this it is claimed that the awards are invariably made on a beef standard. In other words, that judging is the same as it should be, properly, at a fat stock show. Fat is made the standard of merit, in which case the fattest animal wins. Character and breed type, fine points of make, symmetry, breed characteristics, so valuable to the breeder, are ignored for the highest finish of adipose tissue, valuable in a beef show, but worse than useless to the breeder of animals of the greatest merit of his favorite breed. So long as the exhibits are of breeding animals and for breeding purposes it must be apparent to every one that the butcher's standard is out of place and the breeder's standard instead should govern the awards in the show ring.

At this latest exhibition of the Hereford breeders, referred to at the opening of this article, and one of the most successful in point of numbers on record, this adherence to the modern show yard standard which our showmen have so long criticized was so marked as to attract the attention of exhibitors and receive their condemnation. Character and type were lost sight of and fat triumphed. So universally was this the case that the Hereford Association having the exhibition in charge has determined hereafter to guard against the impropriety, and require that the judging shall be done with reference to the value of the animals for breeders rather than for the butcher's block.

Here is a chance suggested where stock-breeders at our exhibitions can correct some of the errors of practice they have been subjected to in the past. It belongs to individuals, and it is their right, to guard their own interests. Let the standard of merit be settled between judge and exhibitors before the work of comparison begins, and then insist and see to it that the understanding is carried into the arena. Outside of the Jerseys we have no organized breeders' association in our state, but in the absence of organization there can be combination among exhibitors. Using fat as the standard of merit has gone on long enough. Breeders and showmen should be active in establishing their own rights and when secured should be vigilant in defending them.

A NATIONAL LIVE STOCK SHOW.

Since the very gratifying success of the Hereford breeders' show and sale at Kansas City, the subject matter is being talked up of a national live stock show and sale, in which all leading breed associations shall have the right and be invited to take part. The idea is on a broad scale and looks feasible. The matter is coming before a joint meeting of the several breeders' associations to be held in Chicago the present week. The times are certainly auspicious for such a gathering of the breeds. Each breeders' association has the means in hand to look after its own interest in such a combined show. Whether such an enterprise will be undertaken will depend on the sentiment manifested at the meeting of the combined associations.

FIRST MOWING MACHINE IN MAINE.

While visiting an old subscriber last week, I was shown an old copy of the *Maine Farmer*, printed Aug. 25th, 1853, and while glancing over its columns this paragraph attracted my attention:

"It gives us pleasure to chronicle the fact that one farmer in Maine has put into successful operation a mowing machine. The gentleman is Seth Storey, Esq., of Scarborough." Then it goes on to tell how much work can be done with one of these machines.

In glancing at the columns of the *Farmer* of to-day, and noticing the great variety of farming implements and labor saving machines advertised, one can scarcely realize that 46 years ago there was but one mowing machine in the state. The years that have passed since then have indeed been years of progress.

A GREAT SUCCESS.

State Pomological Society Meeting at Newport.

In the history of the State Pomological Society reaching back over almost thirty years, no such success has been achieved at its annual meeting as at Newport, last week. It was the first meeting under the directing influence of Sec'y Elijah Cook, and naturally he gave that thorough attention to it as to everything he undertakes. The outcome confirms his ability and still further, enhances his popularity with the farmers of Maine. President Munson has also been an earnest worker, and these backed by the efficient executive committee, perfected the arrangements for a most successful gathering.

At the same time no such results could have obtained but for the hearty cooperation of Sebastock grange and the citizens of Newport. The invitation coming from the grange necessarily threw upon it a responsibility for many details, and right loyally did the committee, led by Bro. R. H. Libbey, perform the labor. The decorations were fine and elaborate, the choir one of the best heard for a long time, and the interest manifested by the citizens hearty in every particular. The wisdom of holding fruit exhibitions in country towns and fruit growing sections has again been fully demonstrated, and the precedent so well established that it will hardly be disturbed in future years.

Not the least important factor has been the liberal advertising directed by Sec'y Cook and the friends at Newport, which kindled interest in every locality. No apologies are called for this year from any friend of our pomological interests for no such meeting has ever been held in Maine. Commencing with the prayer of Chaplain Webster of the G. A. R. the interest of the large audience, filling Meridian hall, increased steadily. The eloquent address of welcome by Hon. J. S. Sanborn, Newport, well merits a careful reading.

Mr. President, Members of the State Pomological Society and Fellow Citizens: In behalf of the members of Sebastock grange and the citizens of the town of Newport we bid you a sincere and hearty welcome, and extend to you the warmest of our town. We believe that this is the first time that we have had the honor of your presence with us, and we beg to assure you that your visit will be fully appreciated. And we feel that you will pardon us, if we say that your welcome, perhaps from a selfish standpoint alone, is all the more cordial because we wish to place ourselves at your feet for the science of fruit culture. We wish to say that Newport is becoming a prosperous town. Old rivalries and hatreds are dead and forgotten. Our bond of union grows stronger every year. We are ambitious, we are determined to expand and develop to the utmost our resources, but in righteous and just ways alone. Now we are the natural center of the fruit industry of the State. The soil of the Sebastock river valley, which drains Western Penobscot and Eastern Somerset counties, is not rivalled, in our judgment, in fertility and remunerative capacity, under proper cultivation. We are the center of the fruit industry of the State. We are the center of the fruit industry of the State. We are the center of the fruit industry of the State.

As a village, therefore, we are interested in agriculture. Our continued development depends largely upon the success of the farmer. He will be considered our greatest statesman and best friend who will do the most to secure and maintain that prosperity. But, notwithstanding the natural advantages, under proper cultivation, we have various branches, is almost in its infancy throughout this community. We have but few large orchards, we may state still fewer good ones and there is a blighting exception here and there this whole subject has been sadly neglected by our farmers. Indeed, but little effort was made by too many of them to save their fruit trees from the ravages of the blighting effects of the worms and caterpillars during the past season. But on the whole, we feel that our farmers are coming to understand more and more the importance of the fruit industry. They are beginning to study, they are anxious to learn. Thrice welcome then are those who will give the instruction, the enlightenment needed.

It seems to us, further, that the state owes to its grange and to your society a debt of gratitude. Your works have been of the past, your influence broad in sustaining and restoring the sick and discouraged agriculture. And this must always operate as an element of your welcome wherever you may meet. We are all aware of agriculture's deep depression during the past years in this state, of the hard struggle of many of our farmers to maintain themselves, of their trials and discouragements. We have deplored the fact that some of them have felt forced to abandon their homes and seek other occupations. We have felt sad to know that our rural population has been constantly decreasing. The night is indeed been dark and the prospect gloomy. But we believe that a brighter day has already dawned. The law of compensation applies. During this very depression the old, a system of theory, of uncertainty, too often of ignorance with all its weakening and disastrous results.

And on the grave of that old system has sprung another, a broader and a better one, a system which requires thoroughness and a practical and scientific knowledge of the subject, a system which exacts that the successful farmer shall be a man of thought and of study as well as of labor, a system which demands that he shall be a comprehensive man, that he shall look beyond the boundaries of his own field, participate earnestly in the affairs of the state and see to it that his state's laws are wise and wholesome and not injurious to his interests. That Agriculture has had this new birth, that we have to-day some prosperous farmers upon us, that we feel and have faith to believe that there is coming to the intelligent farmer in the near future a prosperity, the like of which has never been known, is due to some extent surely, we think largely, to the labor and beneficent influence of the grange and your society. We therefore hope that you will enjoy your visit with us and that your good works and influence may continue to increase until this community and the whole state shall blossom like the rose, and shall contain a dense population of prosperous and contented farmers. Then and until then shall your mission be performed.

Response, Professor Cook. We of the Pomological Society, each and every one, must be pleased and thankful for the hearty and generous welcome we have received. No words, though ever so happily spoken, can attend to the thanks which Newport to-day as the acts, work and deeds of kindness so generously given by the good people of Newport, and so well expressed by those having the meeting in charge.

We have been pleased and gratified ever since we stepped off the train and met large-hearted, broad-minded Brother Libbey, whose two lips have been so untiringly and so earnestly and generously performed. It is often said that the right kind of a wife more than doubles the possibilities of a man's success, and what we have observed of the assistance received by Mr. Libbey from his better half seems to prove the statement true. In fact, all of the good people of Newport show evidence upon every face of the desire to make our coming among them both pleasant and successful.

We hope that this meeting will leave an impression for good upon every one who attended its sessions in this or adjacent counties. There are many ways in which the industrious tiller of the soil needs information, encouragement and inspiration, to enable him to make his labors upon the farm a success.

If anything that may be said here will induce some of the farmers of this section to wish to purchase a few good, thrifty and flourish, and bear much fruit, where now there is but one, the object of the meeting will be largely accomplished and its success cannot be questioned.

Response, G. M. Twitcheell. It is a pleasure to respond to the eloquent and well chosen words of welcome for these only confirm what our eyes have beheld since entering the town. The work of arranging this ball with all its details has been a most interesting and arduous task. It has been followed by Alexander, Farness (the latter being rather uncertain) and, in 1882, by the Wealthy. A little later Tetefsky, Yellow Transparent and Montrose were added to the list, while in 1880 Dudley's Winter began to be widely disseminated. The last named variety which, with the Wealthy, has proved to be one of the very best for this way in this fertile, but at that time almost inaccessible region, and in succeeding annual visits introduced many hundreds of dollars worth of so-called hardy fruits, all of which soon succumbed.

At the 1875 meeting at Bangor was introduced from New Brunswick nurseries under the name of "New Brunswick," and this was a beginning of a new era in the pomological history of the State. The Wealthy was followed by Alexander, Farness (the latter being rather uncertain) and, in 1882, by the Wealthy. A little later Tetefsky, Yellow Transparent and Montrose were added to the list, while in 1880 Dudley's Winter began to be widely disseminated. The last named variety which, with the Wealthy, has proved to be one of the very best for this way in this fertile, but at that time almost inaccessible region, and in succeeding annual visits introduced many hundreds of dollars worth of so-called hardy fruits, all of which soon succumbed.

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Response, Prof. W. M. Munson, Orono. In accordance with the custom of previous years becomes the duty of the president of the society to deliver a short address upon the work of the society, or some subject relating to horticulture. As workers in the same field, we are seeking to learn the best things to do in the line of horticulture and the best way of doing them. We are striving to bring to bear, in this search after truth, the thought of the scientist, the art of the expert gardener or fruit grower, and the results of the patient experimenter. It is only by careful, varied and repeated trials and often after bitter disappointments and discouragements that fair conclusions and substantial results are obtained. So in the practical branches of horticulture, success, in other words, financial gain, comes not to the shiftheads or the indolent, but to the wide awake, up-to-date, energetic growers who profit by the experiences of other growers as well as by their own mistakes and triumphs.

not received sufficient attention in the past. A few years ago Mr. D. H. Knowlton, at that time secretary of this society, delivered a very interesting and instructive paper on the "Possibilities of Fruit Culture in Maine," in which the advantages and opportunities in this line were most clearly set forth. It is not my purpose at this time either to discuss or to ignore the difficulties and hindrances which must be encountered. The diseases of fruit are apparently increasing in number and severity. The insect enemies are ever with us. But with increasing knowledge and preventive measures, edge of means of combating those difficulties. With the attacks of fungi come the improved fungicides; with the insects come a broader knowledge of the use of poisons and preventive measures. Ten years ago the treatment of orchards with insecticides and fungicides was in its infancy, and "sprinkling" was ridiculed. To-day every enterprising orchardist in the state recognizes the importance of the practice. This advance in ideas is in no small degree a direct result of the discussions which have been held in the meetings of the Maine Pomological Society.

In the past our farmers have been urged to plant more trees and vines. In the present and the future the watch word must be improvement. Instead of investing more money in planting orchards we must now aim to secure greater returns from money already invested. More attention must be given to fertilizing the orchard, to culture, to tillage, to pruning, to thinning the fruit and to business methods in handling and marketing the product.

Possibilities in Aroostook. No part of the state is better adapted for the general operations of agriculture than is Aroostook county—"the Garden of Maine." The winters of northern Maine are so severe, however, that until recently fruit culture has received comparatively little attention. In the past twenty years ago the positive assertion was made by a well known fruit grower and nurseryman that fruit culture was impossible north of the latitude of Houlton.

The first settlers on the Aroostook river seem to have made no attempt at fruit raising. About 40 years ago a few of the pioneer settlers, who were engaged in the lumbering business, began to plant upland farms, but the results gave little encouragement. Such of the trees as lived bore inferior or worthless fruit. After a few years the tree-peddler found his way into this fertile, but at that time almost inaccessible region, and in succeeding annual visits introduced many hundreds of dollars worth of so-called hardy fruits, all of which soon succumbed.

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Blueberries. The blueberries of America have been strangely overlooked alike by horticulturists, and by historians; yet there are no less than six or seven distinct species which furnish fruit of considerable value, and as many more which, though of less importance, produce fruit which may be eaten.

Despite the great uses that have been made of the berries by the Indians and by the colonists in New England there are but few records referring to this fruit. We learn that Champlain, as early as 1615 found the Indians near Lake Huron gathering blueberries for their winter store, and Roger Williams mentions "Attitash" (Whortleberries) of which there are divers sorts, sweet like currants." Aside from two or three minor references, these are about the only records extant, except in the various botanical and floral published since the beginning of the present century.

Doubtless the reason for this apparent neglect is largely due to the abundance and excellence of the blueberry. There seemed to be no reason for the exertion incident to cultivation in order to procure a liberal supply of fruit.

In New York and in Michigan abortive attempts at cultivation have been made. At the Jackson Aboretum, in Massachusetts, James Dawson has grown many seedlings and has learned some valuable lessons regarding methods of culture. At the present time, however, there is practically no systematic attention given to the garden culture of the blueberry, save that recently undertaken at the Maine Experiment Station.

In many parts of our state there are thousands of acres of land utterly worthless for agricultural purposes, which after the timber is removed, stand up an abundant growth of blueberry bushes, alders, poplars, gray birches, etc., and which by proper management may, it is believed, be made to yield a handsome profit to their owners. In New Hampshire the picking of blueberries has come to be an important industry in many of the country towns. Whereas, a few years ago, farmers thought the blueberry crop of no account, and allowed perfect freedom in gathering, it is now a source of considerable cash value of considerable importance.

In the southeastern part of Maine, principally in Washington county, there are about 150,000 acres known as the blueberry barrens. The fruit from the barrens is mainly taken in canning factories at Cherryfield, Columbia Falls and Harrington. The total output from these factories the present season was about 50,000 cases of two dozen cans each, representing a cash value of considerably more than \$100,000.

Now, as already intimated, there are vast areas in our state which, while bearing a considerable number of blueberry bushes, are not utilized as they might be. The systematic treatment of these wild lands, after the manner practiced on the barrens, might well be extended to many other sections.

Again, there are large areas, otherwise worthless, which might without doubt be made to yield good returns if in some way a growth of blueberries could be started—either by setting bushes or by scattering seed. Perhaps this suggestion may be regarded as visionary, but it is quite within the range of possibilities. Another phase of the subject, which is worthy of careful attention is that of domestication and the improvement of types by selection.

Little has been attempted in the garden culture of the blueberry. That satisfactory results might be obtained, however, there is little doubt. The fruit, in fact, is so far superior to that of many other cultivated plants and is very susceptible to the influence of environment. So I feel perfectly safe in predicting that within a very few years, a race of garden blueberries, adapted to the soil and climate of the best of the other small fruits will be placed before the public and the culture of the blueberry will be as much a matter of course as that of the blackberry or the raspberry.

From time to time in the past, the cranberry has been called to the attention of the fruit growers of the state, but this fruit does not yet receive the attention its importance demands. The subject was treated so thoroughly by Prof. Harvey at the meeting of this society in 1890 and the practical details of culture were so fully explained at the last meeting in August, 1892, that I shall but briefly refer you to the transactions of the society for those years.

Chestnuts. In various parts of the state are rocky, sandy ridges which are of no particular value for general agricultural purposes, but which are specially suited for the growth of the chestnut tree. Since the common American chestnut is perfectly hardy in Maine, there is every reason why the many bushels of nuts that are used each year should be produced at home; thus adding to the wealth of the farmers, utilizing waste places, and, in many cases, hiding deformities in the landscape. Similar remarks will apply to the hickory nut and to the butternut.

The common hazelnut grows freely in many parts of our state, but so far as the member the delights of childhood in romping through the fields in search of the brown prizes contained within the ample husks. Closely related to this is the huckleberry, which would call the attention of the society to these two nuts as affording a promising line of investigation.

which makes an all round man. This is the age of specialists, but the specialist must have a foundation on which to build.

There is an element of uncertainty in all agricultural work. The skilled mechanic may select his material, and, applying the principles he has learned, can construct a machine that shall be practically complete and in accordance with his plans and expectations. No farmer, however, can select his material, and, applying the principles he has learned, can construct a machine that shall be practically complete and in accordance with his plans and expectations. No farmer, however, can select his material, and, applying the principles he has learned, can construct a machine that shall be practically complete and in accordance with his plans and expectations.

No agricultural college can turn out a farmer who can raise exactly 20 bushels and 35 pounds of wheat per acre year after year. But this does not signify that a young man is not better equipped for his life work because of the training he may obtain at an agricultural college. In other words, a thorough study of the laws of nature, as applied to agriculture, will reduce the uncertainty to a minimum, and will raise the possibilities of production to the maximum. The college brings to bear all of the sciences relating to the subject of agriculture, geology, botany, physiology, entomology, etc., and gives to the young man who has these resources, provided he has the additional and very essential quality of sound common sense, distinct advantage over the man who derives his information solely from the school of experience.

In the words of one of the leaders in agricultural education: "The range of practical knowledge which is now available to leave its requirement to the uncertain chances of the chance farmer with chance information. The industry is so great that it is entitled to bring to the attention of the public the results of its investigation, and to demonstrate and observation can classify. There has, heretofore, been too little intellect and too much luck in the processes of agriculture; too little live investigation, and too much following in the rut made by others."

Granting the desirability of giving our young men and young women a college training as a preparation for their calling in life, we must still meet the fact that a vast majority of such young people, and the older ones as well, cannot avail themselves of such advantages. In order to supply these needs, we need of help, we need to go where the people are. It is the case of Mohammed and the mountain. If the Board of Agriculture would discuss farming and dairying, it must hold its sessions in the country, on the farms, in the dairies. So if this society would aid the fruit growers of the state, it must provide educational means within reach of the class it seeks to benefit.

The state of Maine has heretofore been called to the need of disseminating horticultural influence and information through the state. During the past year our executive committee has been engaged in a campaign to secure these lines. Special field meetings were held at Greene, and in conjunction with the State Board of Agriculture at Manchester and at Sagamore Farm, Camden, where the subjects of orchard culture and management were discussed and practical demonstrations of the preparation and application of insecticides and fungicides were made.

The officers have planned to extend this educational work as far as the funds will permit, by means of "horticultural schools" in various parts of the state. At these schools both principles and practical problems connected with the management of fruit plantations will be discussed by men thoroughly conversant with their subjects.

One of the serious problems in the history of any organization is that of membership. In our own case the great weakness has been in the custom of drawing mainly upon those who take a certain amount of money for entrance to the annual exhibitions. While a few dollars may be saved to the treasury by requiring exhibitors who are awarded prizes to pay \$10 in premiums to become life members, it does not consider the policy of compulsory membership a wise one.

In many states an important factor in the strength of the state horticultural societies is the auxiliary membership of local societies. It is true that at the present time there are very few such local societies in this state, but I would further suggest that the attention of this society the advisability of encouraging the formation of such local organizations and fostering the same in every way possible.

Owing to the increasing importance of a knowledge of the world's progress along the lines of botany and vegetable physiology, as well as in the knowledge of our insect friends and foes, it seems especially important that standing committees be created whose duty it shall be to present to the society each year a resume of the work done along these lines. I would further suggest that a similar report be furnished each year by the committee on nomenclature and new fruits.

Our Prospects. During the past year the fruit growers have had much to contend with but the experience of those who have fought bravely the battle against the elements and fungus enemies, but more especially against the hold which the customs of the past have upon our practice as orchardists, can see how the orchardists of Maine are awake as never before to the possibilities of their own calling, and to the importance of doing the right thing at the right time and in the right way.

New occasions bring new duties. Time makes ancient good unobtainable. They must upward still and onward. They must keep abreast of truth.

AFTERNOON. The opening hour for the afternoon session found the hall filled to repletion, every seat being taken, while additional tables for the fruit display were made necessary. It was a grand audience which Mr. Powell faced.

"Some New Problems in Agriculture," by Hon. Geo. T. Powell, Ghent, N. Y. Certainly there are great problems before us who are seeking to study pomology, as well as those of other occupations. [CONTINUED ON FOURTH PAGE.]

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Ham Separators

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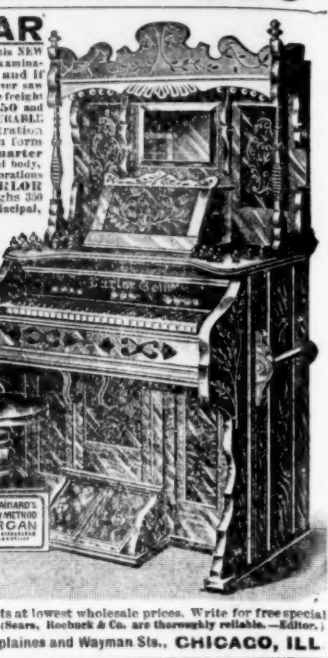
Queen of Home Magazines. It is on fine paper and profusely ill- strated. It gives 32 to 44 pages a month, color in colors every issue. Its American writers; in short, it is an regular departments are ed- ing magazines. It has no superior one dollar a year, and it has over the Woman's Home Compa-

to introduce it to the readers of low price, which enables us to BER, the *Maine Farmer* gives the or new subscribers and renewals the Woman's Home Companion. The ready, and the whole offer is the already paid in advance, take advan- every reader of the *Farmer* to take description at once.

RTS—50c per hundred, 10.00 ton
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100 Carloads for Sale Annually
No. 1 Hardwood Canada Un-
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dry condition, thereby increasing their value
from 15 to 20 per cent.

ALSO PURE GROUND BONE FOR SALE

For prices, pamphlets, etc., address

GEORGE STEVENS,

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GEORGE STEVENS,

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Combination Bull Ready for

Service. Solid color, black

points, first class individual.

Dropped Jan. 25, 1900. Sire,

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16 lbs. 5 1/2 oz. 2d dam, Port

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to HOOD FARM, Lowell, Mass.

A solid colored bull

of color, son of Los Gun-

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class bull, "Hiring or dead."

His granddaughters and great-granddaughters

Don't Scratch Along

If hens won't
lay when eggs
are high, in fall
and winter—
make them lay
in the old reli-
able way, tested
and proved for over 30 years, with
SHERIDAN'S
CONDITION
POWDER

It's safe, sure and economical.
Makes pullets early layers. Brings
mounting hens round quickly.
If you can't get it we send one pack 3c.;
five packs \$1.50. Cash \$1.25. Express
paid. Sample of best poultry paper free.
S. S. JOHNSON & CO., Boston, Mass.

This I Will Do!

I will pay \$100 reward for any case
of colic, hoarse, curbs, splints,
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of the age, and every
stable should have a bottle always on
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by remaining moist on the part affected.

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DR. S. A. TUTTLE. I have used your Elixir on one of the
best horses that I ever saw in a horse, and it entirely
cured the trouble. I take you to be a man of science, and
I am sure that you will not mind my saying so. I am
a horse owner, and I am sure that you will not mind
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Tuttle's Family Elixir cures Rheuma-

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MAINE CENTRAL RAILROAD.

Arrangement of Trains in Effect Oct. 2, 1899.

FOR BANGOR: Leave Portland, 6:55

10:25 A. M., 12:35, 1:30, 11:00 P. M., 7:20 A. M.

(Sundays only) via Hallowell and W. C. R. R.

1:10 P. M., via Lewiston and Win-

throp; leave Brunswick, 12:15, 7:55 and 11:27

A. M., 1:34 and 3:25 P. M., via Lewiston and W. C. R. R.

Sundays only; leave Bath, 11:45, 7:20 and 10:50

A. M., and 5:00 P. M.; leave Lewiston, 11:27

(Sundays only) 11:45, 7:20 and 10:50 A. M.

1:34 and 3:25 P. M.; leave Lewiston, 11:27

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Poultry.



FATTENING POULTRY.

Among the men who are reaching

close to the heart of the problem of

economic production and stimulating in-

terest in increasing flocks and herds is

Prof. James W. Robertson, Dairy Com-

missioner of the Province of Canada.

His latest work has been in connection

with experiments in fattening poultry

and we are able at this time to present

the readers of the Farmer with his mar-

vel in detail and with this, cuts of fatten-

ing and shipping coops prepared as

by five-eighths of an inch thick. The

spaces between the slats in front should

be not less than two inches wide to per-

mit the chickens to put their heads

through for feeding from the trough.

The slats on the bottom should be put

on three-quarters of an inch apart, and

the outside slat nearest to each side

should be an inch or more from the

corner piece. That prevents the corner

piece along the inside of the bottom from

becoming a ledge to hold the droppings

of the chickens. Each compartment has

a small sliding door in front.

The crates were placed on stands about

2 1/2 or 3 feet from the ground. The dropp-

ings from the chickens were received on

sand or some absorbent material.

A light 11" trough, 2 1/2 inches inside,

was placed in front of each crate, being

carried on two brackets nailed to the

sides of the crate. The bottom of the

trough was about level with the floor

slats of the crate.

The grain was ground fine and was

mixed with skim milk, sweet or sour,

preferably sour. The hulls of the oats

should be pulverized until they are

scarcely discernible. The mixture should

have about the consistency of thin por-

ridge; so thick that it will not run read-

ily; and so thin that if a large spoonful

of it were put on a plate it would spread.

The chickens were fed from the

troughs three times a day at first. After

the first ten days, they should be fed

only twice a day. At the end of the

second ten days, they may be fed by

the use of the cramping machine. Dur-

ing the last ten days of the fattening

period a small portion of tallow should

be put with the feed. At first, at the

rate of one pound of tallow per day for

about 70 or 100 chickens. The quantity

may be gradually increased until one

pound per day is given to from 50 to 70

chickens according to size. The best

way to mix the tallow is to melt a por-

tion of it, thicken it with still hot feed

meal, and then mix the right quantity

of that paste with the other feed for the

day.

An important point is to feed regularly,

and if any food remains in the crop

from a previous meal, not to feed at all

until the crop is quite empty. In case a

bird becomes sick it should be taken out

and put in an open run without food for

a day. Grit should be offered to all the

birds once a week, and water supplied

every day.

The following tables show the results

from the chickens fattened.

On 11th October, the 133 chickens

weighed 575 pounds.

As good chicken raisers, to carry on this

The following table shows the quanti-
ties consumed per pound of increase live
weight.

	Ground meal.	Skim milk.
From trough (3 weeks).	6.73 lbs.	plus 0.17 lbs.
By machine (10 days).	5.15	6.17

In all instances the figures do not in-
clude anything for labor.

Reverting again to these chickens, at
the end of 6 weeks they were starved for
from 24 to 36 hours and killed by wring-
ing their necks. They were plucked
but were not drawn. A ring of feathers
about two inches long was left at the
head of each bird. They were placed
on a shaping board as already described.
After being thoroughly cooled each bird
was wrapped in a piece of clean brown
paper, leaving the neck and head to pro-
ject at one end and the legs at the other.

Shipping cases were made to hold 12
fowl each. The cases were 33 inches
long by 19 inches wide by 6 1/2 inches
deep. The ends were one inch thick, as
also was the centre piece across the mid-
dle of the case. The sides, top and bot-
tom were of five-eighth inch spruce.

Figure 2 shows the branding on the end
of the shipping box. The figure
shows one half of the box packed with
six chickens. The other half is intended
to hold an equal number.

The following table shows the cost
with freight on usual basis (not express)
of laying down and selling such chick-
ens in Liverpool.

	Per pair.
Original cost of chickens.	54 cents.
Cost of shipping.	3 "
Freight commission, &c.	18 "
	\$1.08

As they weighed 11 pounds per pair
and brought 16 cents, that was equal to
\$1.76 per pair. The consignee wrote: "I
was agreeably surprised at the all-round
excellence of your small experimental
shipment of Canadian capons. On open-
ing the cases the birds were found to be
in beautiful condition and presented a
most salable appearance. After the
birds were uncased, I hung one to find
out how long it would retain its bright
appearance, and found that it became
milky white in color as soon as the bird
had dried out of the chilled state; to-
day, five days later, it is as nice looking
as fresh-killed bird."

This industry is carried on all the year
in England, where the greatest supply is
from June to the end of December.
Many of the most valuable points were
brought out by questions as follows:

Q. You would think the blood would
color the flesh?

A. It does not appear to do so. Since
there is no out on the skin of the chick-
en, either on the neck or for removing
the entrails, the chickens will keep a
long time without any decomposition.
The juices of the flesh are not exposed,
and there is no chance of bacteria getting
at them. The safe keeping is possible
only when the chickens are starved for
thirty-six hours, and there is no food in
their crops or intestines to decay.

Some turkeys sent over from Ontario
last year, starved twenty-four hours and
plucked, killed and prepared in the way
recommended, were landed in splendid
condition; whereas some turkeys sent
from Prince Edward Island, with the
feathers on and the crops full of food,
were landed in such condition that they
had to be cut and sold on hucksters' bar-
rows for one shilling and six pence.

Q. Which is the more harmful, leaving
the feathers on or the food?

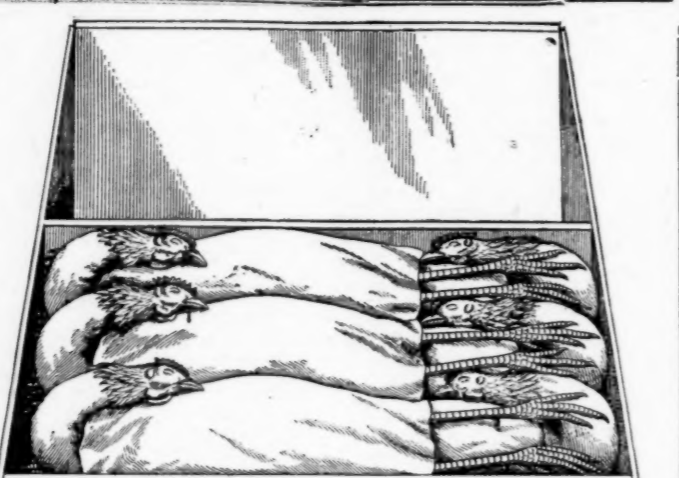
A. Oh, the food. It causes decompo-
sition. The feathers, being left on pre-
vent the birds from being properly
cooled, but otherwise they preserve the
skin.

Q. Would extreme hot weather have
any deleterious effect upon the process
of feeding?

A. I do not think so, unless it was
continued too long.

Q. Would the birds thrive if kept
closed up in hot weather?

A. I think, if they were kept in shaded,



12 FOWLS
WEIGHING.....TO.....lbs.

GROSS.....lbs
TARE.....
NET.....

CANADIAN DOMINION DEPARTMENT OF AGRICULTURE. OTTAWA, CANADA.

pecially for our columns from the original

plates. We present Prof. Robertson's

account as given before the standing

committee of Parliament. Its complete-

ness justifies its length and it

Have You a Dictionary?

The *Maine Farmer* will sell at a low price the STANDARD DICTIONARY, two volumes, well bound, just received from the publishers.

Having been presented for probate: Ordered, That notice thereof be given three weeks successively prior to the fourth Monday of November, inst., in the *Maine Farmer*, a newspaper printed in Augusta; that all persons interested may attend a Court of Probate then to be holden at Augusta, and show cause, if any, why the said instrument should not be proved, approved and allowed as the last will and testament of the said deceased.

W. T. STEVENS, Judge.

Attest: W. A. NEWCOMB, Register.

